

**PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

DAVID R. DUNCAN, *ET AL.*

Serial No.: 10/708,724

Filed: MARCH 19, 2004

For: A NOVEL CULTURE METHOD FOR  
CORN TRANSFORMATION

Group Art Unit: 1638

Examiner: ROBINSON, KEITH O.

Atty. Dkt. No.: MONS:126US

CERTIFICATE OF ELECTRONIC TRANSMISSION  
37 C.F.R. § 1.8

I hereby certify that this correspondence is being electronically filed with the United States Patent and Trademark Office via EFS-Web on the date below:

September 12, 2007  
Date

/Robert E. Hanson/  
Robert E. Hanson

**RESPONSE TO NOTIFICATION OF NON-COMPLIANT APPEAL BRIEF**

**Mail Stop Appeal Brief - Patents**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

Appellants hereby submit this response to the Notification of Non-Compliant Appeal Brief dated July 12, 2007, for which the date for response is September 12, 2007 in view of the enclosed petition for extension of time and fees. No additional fees are believed due in connection with this filing. However, should any fees become due under 37 C.F.R. §§ 1.16 to 1.21 for any reason relating to the enclosed materials, or should an overpayment be made, the Commissioner is authorized to deduct or credit said fees from Deposit Account No. 19-3140.

## **I. RESPONSE TO NOTIFICATION**

In response to the Notification of Non-Compliant Appeal Brief, Appellants submit below and amended Summary of the Claimed Subject Matter compliant with 37 C.F.R. § 41.37. Pursuant to M.P.E.P. § 1205.03(B), Appellants are submitting this section only and not an entire new Brief. Withdrawal of the Notification and consideration of the appeal on the merits is respectfully requested

## **II. SUMMARY OF CLAIMED SUBJECT MATTER**

The subject matter defined in independent claim 1 comprises a method of obtaining transformable callus tissue comprising germinating a mature corn seed in tissue culture media containing an effective amount of an auxin and an effective amount of a cytokinin to produce a growing seedling containing a nodal section; isolating the nodal section from the seedling; and culturing the nodal section on a callus induction media to produce embryogenic callus suitable for transformation cytokinin (Specification ¶ 0008, line 1 - ¶ 0010, last line; ¶ 0045, line 1 - ¶ 0046, last line; ¶ 0048, line 1 - ¶ 0049, last line).

In some embodiments of the method, the auxin is picloram and the cytokinin is BAP (dependent claim 2); in some embodiments the picloram concentration is between about 0.5 mg/L and about 20 mg/L (dependent claim 3), and in some embodiments the BAP concentration is between about 0.1 mg/L and about 10 mg/L (dependent claim 4). *Id.* ¶ 0027, l. 1-last line; ¶ 0046, l. 1 - last line, ¶ 0071, l. 1-last line; Example 1 at ¶ 0084, l. 1-6; Example 3 at ¶ 0106, l. 1-5 and Table 3; and Example 4 at ¶ 0113, l. 1 – ¶ 0120. l. 16. In some embodiments, the tissue culture media is solid (dependent claim 5). *Id.*

In some embodiments, the nodal section is obtained from a seedling between 3 and 30 days after germination, or a seedling between 7 and 10 days after germination (dependent claims

6-7). *Id.* ¶ 0048, l. 1-last line; Example 1 at ¶ 0084, l. 1-last line; ¶ 0089; Example 2 at ¶ 0093 l. 1-last line; and Example 3 at ¶ 0111 l. 1-last line. In some embodiments, the method also includes transforming the callus with a nucleic acid sequence conferring a selected genetic trait to the transformed callus (*Id.* ¶ 0050, line 1- ¶ 0052, last line; ¶ 0064, line 1-¶ 0066, last line; and Example 7 at ¶ 0128, line 1-¶ 0138, last line) and regenerating a transformed plant from the transformed callus containing the nucleic acid sequence (*Id.* Example 8 at ¶ 0140, l. 1-last line) (dependent claim 8).

The subject matter defined in independent claim 16 comprises a method of obtaining transformable callus tissue from a corn plant comprising: priming a mature corn seed; germinating a mature corn seed in tissue culture media containing an effective amount of an auxin and an effective amount of a cytokinin (*Id.* ¶ 0008, line 1-¶ 0010, last line; ¶ 0045, line 1-¶ 0046, last line) to produce a growing seedling containing a nodal section; isolating the nodal section from the seedling (*Id.* ¶ 0008, line 1-¶ 0009, last line; ¶ 0048 l. 1-last line); culturing the nodal section on callus induction media to produce embryogenic callus (*Id.* ¶ 0008, line 1-¶ 0009, last line; ¶ 0049 l. 1-last line).

The subject matter defined in independent claim 17 comprises a method of transforming a corn plant comprising: priming a mature corn seed; germinating the mature seed in tissue culture media containing an effective amount of an auxin and an effective amount of a cytokinin (*Id.* ¶ 0008, line 1-¶ 0010, last line; ¶ 0045, line 1-¶ 0046, last line) to produce a growing seedling containing a nodal section; isolating the nodal section from the seedling (*Id.* ¶ 0008, line 1-¶ 0009, last line; ¶ 0048 l. 1-last line); culturing the nodal section on callus induction media to produce embryogenic callus culture (*Id.* ¶ 0008, line 1- ¶ 0009, last line; ¶ 0049 l. 1-last line); transforming the embryogenic callus culture with a nucleic acid sequence conferring a selected

genetic trait to the transformed callus (*Id.* ¶ 0050, line 1-¶ 0052, last line; ¶ 0064, line 1-¶ 0066, last line; and Example 7 at ¶ 0128, line 1-¶ 0138, last line); selecting transformed callus cells; and regenerating a transformed plant from the transformed callus to obtain a plant containing the nucleic acid sequence (*Id.* Example 8 at ¶ 0140, l. 1-last line).

### CONCLUSION

Appellants submit that this is a complete reply to the Notification of Non-Compliant Appeal Brief. Consideration of the appeal on the merits is thus respectfully requested

Respectfully submitted,

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